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ABSTRACT

When original plans for a large scale dial access information retrieval system (DAIRS) to serve the foreign language department of the College of Liberal Arts at Temple University were dropped, recommendations were solicited for redesigning a facility that would reflect change and provide the instructional functions required by both faculty and students. A synopsis of those functions, identified by a committee reflecting several new interests for using media in teaching and learning, are presented. The process of converting these broad instructional functions into space with equipment and services is described. The majority of faculty and student instructional functions were accommodated using the following facilities: (1) audiotape theater; (2) slide and filmstrip theater; (3) videotape theater; (4) student resources library; and (5) multimedia theater. Other facilities intended to involve faculty in various stages in the selection, design, and production of their own instructional materials are also described. (JPF)

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FACULTY ASSISTANCE IN PLANNING

NEW LEARNING LABORATORY AND MEDIA FUNCTIONS

Robin Edgar Lawrason, PhD.

Paper presentation at the Annual Convention of the Association of Educational Communications and Technology. Miami Beach, Florida, April 1977

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND THE ERIC SYSTEM CONTRACTORS."

Dr. Robin Edgar Lawrason has been Director of the Media Learning Center for the College of Liberal Arts at Temple University in Philadelphia since May 1974. As an Assistant Professor of Speech and Communication Technology he has taught within the Rhetoric and Communication Division of the Speech Department in addition to regular administrative and instructional development duties at the Center.

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FACULTY ASSISTANCE IN PLANNING

NEW LEARNING LABORATORY AND MEDIA FUNCTIONS

When the faculty and the old language laboratory was scheduled to move out of a late nineteenth century building into a new high rise complex, the College of Liberal Arts at Temple University was faced with re-thinking its concept of instructional media for student use. Luckily, money was not a problem. Funds were set up by the Commonwealth of Pennsylvania to provide equipment for new buildings at Temple. Included in these funds was money for a new language lab on the ground floor of the Humanities Building.

The first problem was to decide how to spend the available funds to develope new lab space that would serve both the foreign language departments, and other college departments that required media support for their courses. For once, setting up a committee actually paid off. A faculty "functions committee" was established under the guidance of the Chairman of the Speech Department in order to begin the task of defining the instructional requirements desired in the new facility.

The original plans for the new lab called for a large scale dial access information retrieval system (DAIRS) in three separate laboratory theaters connected by an L-shaped console room. Elaborate relay racks, program tape machines and three consoles were projected. Plans for the DAIRS were included in the architect's blueprints in the mid sixties, although the building was not completed until 1974. In the meantime several important historical events resulted in the cancellation of the DAIRS project. First, the foreign language requirement was dropped at Temple in 1971. Unfortunately, there was an immediate decrease in enrollments. Secondly, by the early seventies most of the large companies that manufactured and serviced DAIRS equipment were either out

of business or in trouble. Furthermore the advent of more individualized and personalized teaching methods made such a large scale system difficult to justify pedagogically as well as economically.

Thus, the Functions Committee was given the task of making recommendations that would reflect change and provide a facility with maximum flexibility. the Committee, composed of faculty from languages (French, German, Hebrew, Spanish, Chinese), as well as members from the Speech Department and the English Language Enrichment Center at Temple (ELECT), reflected several new nterests for using media in teaching. Rather than attempt a shopping list of equipment needs, the Committee stated its interests in terms of instructional functions required for both students and faculty. The following two lists represent a synopsis of those functions.

STUDENT FUNCTIONS: Faculty requested services that would allow students to:

1. listen to an audio tape;
2. record their own voice in response to a program model;
3. control tape motion for review;
4. call for assistance;
5. access all tapes in the lab library;
6. take duplicate tapes home for study;
7. view visual materials (still and motion) either individually or in a large group.

FACULTY FUNCTIONS: In addition, faculty also wanted to be able to:

1. monitor any student's performance;
2. communicate with any student;
3. communicate with any group or to all students;
4. broadcast a program to students under instructor control
5. seize control of students's recorders for examination purposes;

4. broadcast a program to students under instructor control;
5. seize control of students' recorders for examination purposes;
6. use the laboratory for individual study, or with a class;
7. show visual materials (still and motion) either to individual students or to a large group.

FROM LANGUAGE LAB TO MEDIA LEARNING CENTER

It was evident that the Director of any new lab would have to have a wide variety of knowledge and experience in instructional technology in order to build up a Center incorporating all of the operations requested by the faculty. The Functions Committee and the Chairman of the Speech Department was then given the task of finding a new Director. The new Director would first have to oversee the design and purchase of appropriate equipment. Secondly, he or she would have to be able to work with faculty on issues ranging from the installation and operation of the new instructional resources, to the larger question of change in instructional practices in order to best utilize the new facilities. It was also considered essential that the new Director should be able to hold academic rank, teach within the College, and have a doctoral degree. These factors were considered crucial to work with faculty on instructional concerns at the level of a professional colleague, rather than at the level of service staff.

As the successful candidate for the Director's position, I found personally that the Functions Committee's report was valuable in guiding my decisions on the design of the new Center, and the specification of equipment. One of my first tasks was to change the image of the old language lab by creating a new name more in keeping with its broader mission in the College.

MEDIA LEARNING CENTER: The first work "MEDIA" denotes both equipment and non print resources that are available for students and faculty. "LEARNING" is the essential mission of the university. Any support unit which

hopes to be effective must be an integral part of the learning process and programs of the academic departments it serves. "CENTER" illustrates the openness of the new resource facility. It is a place to which faculty and students come for resources; and its activities reach out to assist clients in lecture halls, classrooms, seminar rooms, at home or in any other appropriate learning environment.

SERVICES OF THE NEW MEDIA LEARNING CENTER

Phase One: From Functions to Equipment.

The first task was to convert broad instructional functions desired by faculty into spaces with equipment and services. The majority of faculty and student functions were accommodated using primarily the three new but empty spaces designed for a dial access system.

1. Audiotape Theater: In the largest and the central theater of the Humanities Building space, 130 student positions were made available for the playback and recording of audio cassette tape materials. The theater thus serves the function of the old language lab, but also provides the added option of giving students individual control of their taped programs. Each student position (approximately 28" wide by 30" deep) is separated with a carpet-covered position for acoustical isolation.

Each carrel is equipped with a cassette recorder (Sony ER-750) with headset and built-in microphone. The recorder allows ordinary playback of both sides of a standard audio cassette tape (tracks 1 and 4) using the PLAY button. If the student is to respond to the master tape program, he or she can use red DRILL button to hear the program, then record a response (tracks 2 and 3). To review either the model or the student response, the SKIPBACK button will rewind the tape until released. Upon release of the SKIPBACK button, the recorder automatically returns to PLAY function to review the desired portion of tape.

All 130 carrel recorders can be used for individual play and record. Seventy-six of these student positions are attached to a console system. By pressing a switch on the recorder, students can receive program broadcast from the console. If a student wants a copy of the broadcast program, he may insert a blank tape in his own cassette compartment, and with the CONSOLE PROGRAM and the DRILL buttons depressed, he is able to receive and record the program broadcast.

Most of the features desired by the faculty are incorporated into the Sony Console System situated behind a glass partition in the front of the theater. The system was designed using numerous options. Two separate console control panels allow two instructors to use the system simultaneously, each working with up to thirty-seven students. Up to twelve programs can be broadcast to any one position. A monitor button on each unit also allows the instructor to listen to each student's responses. Row and master control units allow small or large group control of either student programming or monitoring. An intercom switch then allows the instructor to talk directly to a single student, a row or the entire group of thirty-seven. To prevent interruption and recording of instructor's comments, the use of the intercom switch automatically shuts off the student's own recorder.

Special features on the console allow the pre-programming of broadcast tapes. Using six different audio frequency tones on a control track, the master tape can signal stops and starts for the student recorders, activate the record function to tape student responses on blank cassettes in each carrel recorder, or sequence visuals which are displayed via rear screen projection above the console window. These programming features are particularly useful in testing groups of students when timed control of both audio and visual stimuli are necessary. The signal analyser on the console enables the instructor to produce taped copies of individual student responses without recording the test stimuli.

2. Slide and Filmstrip Theater: In the second theater, the function of displaying still visuals for individual students was accommodated The Slide and Filmstrip Theater contains a total of forty-two individual carrels (48" wide by 30" deep). There are a total of twenty-one Kodak carousel projectors for slide programs, and a total of nine Singer filmstrip projectors. The remaining twelve carrels were left open for future expansion, or for use by students working with programmed print materials or individualized tests.

Each of the projectors in this Slide and Filmstrip Theater is connected to an audio cassette machine identical to those in the Audiotape Theater. With modification to the recorders, the student is able to place a cassette in the cassette compartment, and visuals (either a carousel slide tray or a filmstrip) in the projector; and then view a synchronized sound and visual program. Audio tones on a second track automatically advance the projectors to the next visual at the appropriate time. When an instructor wishes to use the second audio track to have students record responses, the recorder may be switched into a manual advance mode. Students would then be able to record their responses to given visual, and control the advance of slides through the manual ADVANCE button on the recorder. By providing the options of automatic or manual advance, listening or listening with recorded responses both faculty and students have gained the use of a flexible system for displaying audio and still visual information.

3. Videotape Theater: The faculty's request to provide student preview for moving visuals is accommodated primarily by the use of the new medium of the video cassette. Since projection of 16mm films to individuals is technically difficult, film use was considered more appropriate in the classroom or lecture hall. The Media Learning Center decided only to provide individual viewing facilities for video cassettes and Super 8 film loops.

Ten Sony Video Carrels, each with a cassette player and small color monitor, allow an individual student to check out and view a videocassette program at his own time and pace. Small group viewing is also possible in the Videotape Theater. Four stations consisting of a lockable Luxor cart with a larger Sony Trinitron color monitor and videocassette player (Sony 2000) are situated in the rear of the theater. Each station has six headsets and can play four different videotape programs to four different groups. A patch panel system allows one cassette player to send one program to all monitors so that up to twenty four students could view the same videotape program. In addition any or all of the monitors can be patched into the university antenna system to receive local broadcast programs.

Super 8 film loops can be viewed individually on one of three Bessler QC units. Through the use of a standard audio cassette, film loop can be given a sound track as well as be programmed to stop and start on given frames. The average three minute film loop can be programmed up to thirty minutes depending upon the amount of motion necessary. The cassette can program a stop on a given graphic or scenic frame for discussion before continuing. Thus, the instructor gains a more flexible and inexpensive medium which incorporates sounds with either still or moving visual images.

4. Student Resources Library: In the original remote access dial system planned for the Center, students were to retrieve all instructional material from their own carrel position. Audiotape programs would be set up on remote master recorders and students would dial in to listen to their desired program. By moving to a direct access system, students require a materials library were they can check out individual copies of resources. Resources include not only audio cassettes, but also slide and filmstrip programs, video cassettes, film loops, and print resources such as programmed workbooks, scripts, lecture notes and tests.

5. Multi Media Theater: Large group presentation functions could not be accommodated within the space of the independent study facilities. The architecture designed for the DAIR system was too rigid to create a comfortable theater for the presentation of multiple images. Thus, a traditional lecture theater in the adjacent Social Sciences Building was used for this purpose. Three large projection screens were installed to allow for the simultaneous projection of up to three images. Dissolve and electronic synchronization equipment can be programmed for up to six carousel slide projectors on the three screens. If film (16mm or Super 8mm) is required, projectors are also available to be operated alone, or in juxtaposition with still images. All equipment can be linked into the theater's sophisticated stereo sound system through jacks in the projection room. In addition, one can connect a microphone and adjust record and play back volume from a panel at the front of the room via a single switch. All other controls and amplifiers are locked away for security and convenience. Audio input jacks at the same point allow a professor to bring in his own equipment and manipulate it at the front of the class rather than having to rely on the assistance of a technician in the projection booth at the rear of the hall.

Another innovative solution is the use of large screen video projection for large group viewing. Rather than separate monitors which are often difficult for students to see, two large screen color projectors were purchased. The Advent Video Beam projectors can enlarge a color video image (tape or broadcast) up to five by four feet. Despite the sensitive nature of the screen material, and the necessity to have the screen and projector sitting in perfect alignment, the system has already proven superior in displaying videotape programs to large groups.

large urban institution with many facilities and resources. When faculty have questions about instructional problems, the Center attempts to locate the best solution. Sometimes this can be solved by a phone call, other times consultation sessions are required. By attending departmental seminars or organizing specific workshops, faculty and graduate teaching assistants can be informed of new teaching strategies of learning resources.

In moving from providing technical services to instructional development services, the Center must continue to involve faculty in its decision-making. The "functions" desired by faculty have been defined, the facility has been designed, and the equipment and services have been installed. Keeping "learning" central at the new Media Learning Center depends on both its staff and the faculty themselves. The staff must now inform, exite, and involve the faculty about the potential they have for expanding their teaching. The faculty must now begin to experiment with the new instructional functions that they have defined. It is the goal of both faculty and Center staff to provide better teaching services for students. The success of the Center thus must ultimately be measured by its effect upon student learning achievement.

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Phase Two: From Technical Production to Instructional Development Services.

In addition to the Center's facilities for a small professional production staff, facilities are also provided to involve faculty in various stages of the selection, development and production of their own instructional materials.

1. Resource Room: To assist faculty in locating commercial or institutional resources on or off campus, the Center maintains a collection of catalogues. Films, tapes, slides and other free, loan, or purchase resources are indexed for faculty according to subject and media headings. In addition there are books and periodicals, on media design, production and use.

2. Preview Rooms: Two small preview rooms are available for faculty to preview and evaluate resources that they have requested. Both faculty and Center staff must review the instructional and technical quality of all materials before they can be purchased for use.

3. Visual Production Workroom. Here both faculty and staff may work together or individually to produce needed instructional materials. Equipment available for faculty use include copy stands, 35mm cameras, overhead transparensy makers, simple graphic production tools, and slide sorters for assembling programs. Both Super 8 and 35mm cameras. Cameras are available for loan to faculty who wish to photograph subjects or events useful in their teaching. Portable video recording units are also available for use throughout the campus, or city. A recent video workshop sponsored by the Media Learning Center illustrated how faculty can use videotape in their teaching and research: to develop instructional sequences; to analyse human interaction, or to give learners direct feedback on performances.

4. Consultation and Program Development: The most important service the Center has to offer is guidance and consultation on the use of media and on development of instructional resources and strategies. Temple University is a